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MARYLAND FISHERIES

PUBLISHED BY CONSERVATION DEPARTMENT OF MARYLAND

No. 17 BALTIMORE, MARYLAND JULY, 1932

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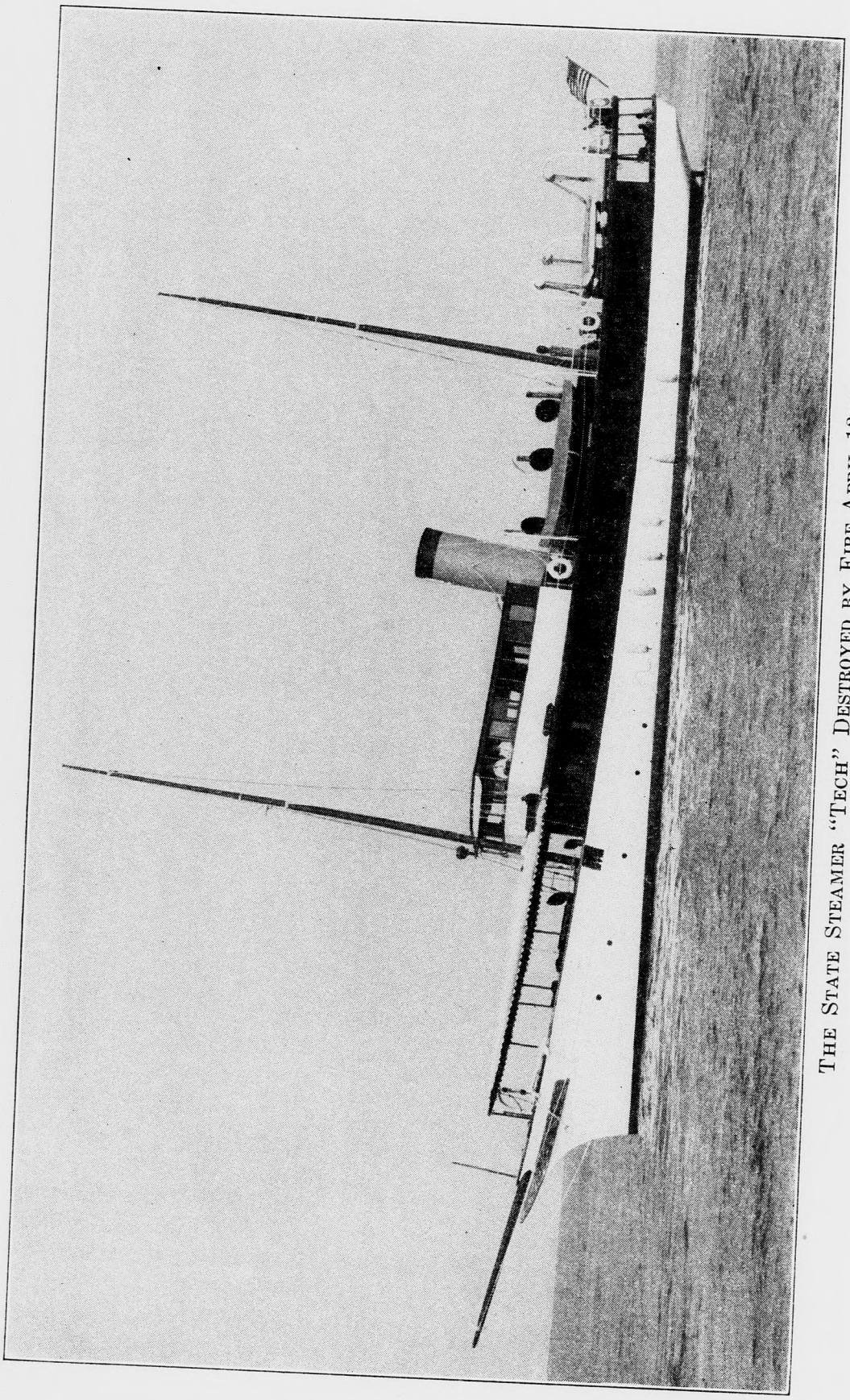

THE STATE STEAMER "TECH" DESTROYED BY FIRE APRIL 13TH

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The program, which was carried out in its entirety, was as follows:

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2:30 P.M.—Invocation: Reverend W. G. McKenney.
Remarks by Chairman Swepson Earle, Conservation Commissioner.
Presentation of Flag: Pythian Sisters, Solomons Chapter.
Greetings from the Chesapeake Bay Country: Senator Joseph C. Webster, Calvert County.
Greetings from Chesapeake Biological Laboratory:
Dr. R. V. Truitt.

ADDRESSES

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Dr. Lewis Radcliffe, U. S. Bureau of Fisheries.
Dr. James G. Needham, Cornell University.
Benediction: Father M. B. Alexander.
4:00 P. M.—Inspection of Exhibitions, Building, etc.

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Governor Ritchie, in his address, showed his marked interest in this new undertaking of the Conservation Department, and stated that he was highly pleased that he had backed the appropriation which made it possible. The Governor also spoke in enthusiastic terms of Southern Maryland, and touched on the early settlement of the Colony in 1634 and the Tercentenary celebration, which will take place in 1934.

HONORABLE ALBERT C. RITCHIE

AFTER A REVIEW OF THE MARYLAND PATROL FLEET, GOVERNOR RITCHIE MADE A VERY STIRRING ADDRESS AT THE LABORATORY DEDICATION EXERCISES AT SOLOMON'S ISLAND.

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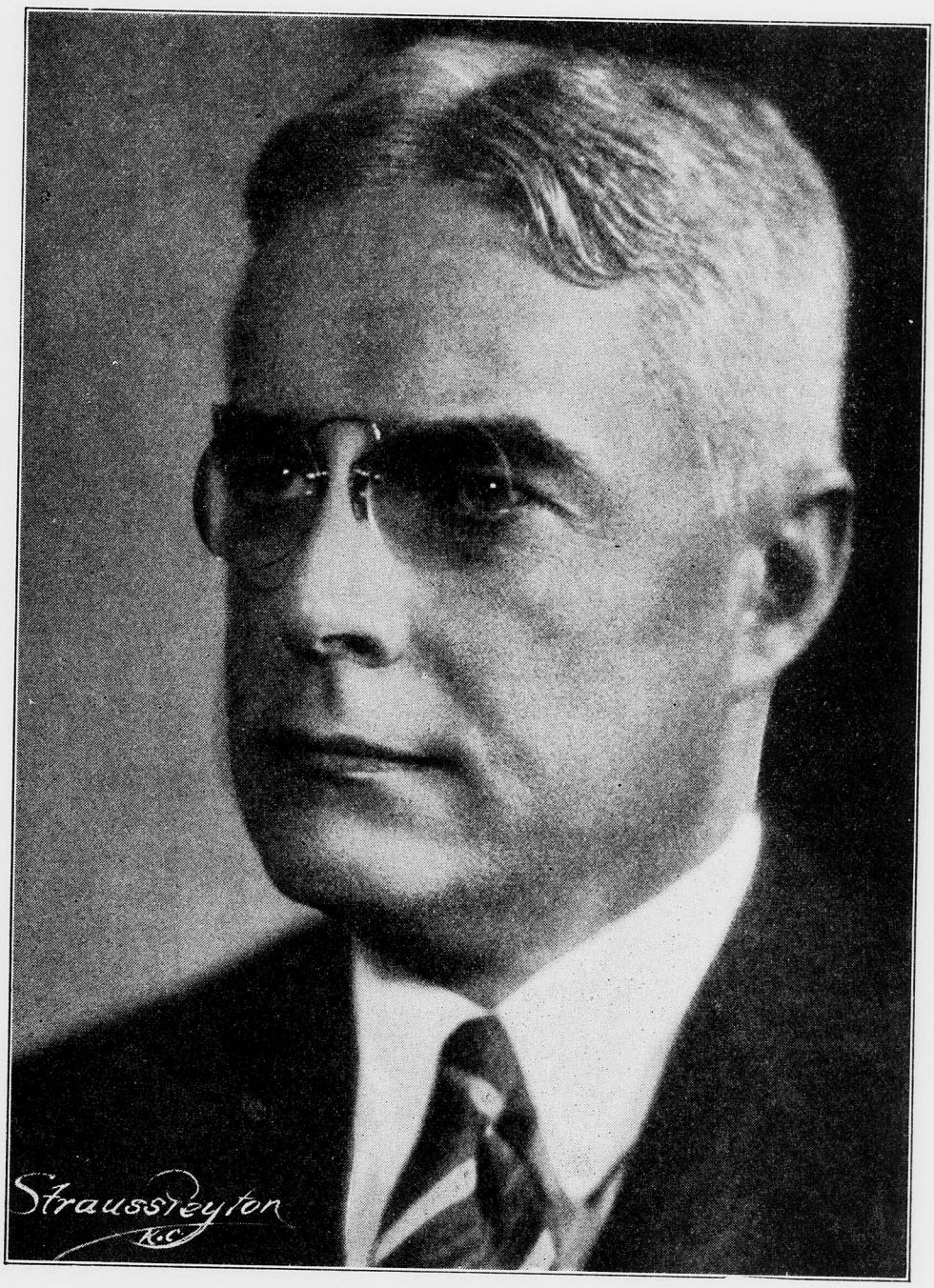

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ADDRESS BY SWEPSON EARLE, *Conservation Commissioner*

"GOVERNOR RITCHIE, LADIES AND GENTLEMEN:

"We are assembled today on the banks of one of the great rivers of the Bay Country—the Patuxent—and on Solomon's Island, long famous as a summer and fishing resort. Overlooking Drum Point, we see one of the finest natural harbors in the United States, one that is much used by the watermen of Chesapeake Bay. It is also visited by ships of the United States Navy, as well as yachtsmen from all points on the Atlantic Coast.

"The older residents of Solomons recall the time, and it was not so very long ago, when oyster pungeys and schooners anchored off Drum Point in such numbers that their anchor lights resembled a floating city. Those were the palmy days of Maryland's oyster industry. Eight hundred or more dredge boats were at work from the upper Bay to the Potomac River. It can well be imagined that little thought was given by the watermen to the conservation of the oyster supply while they were marketing from 12,000,000 to 15,000,000 bushels a year. It was between the years 1870 and 1890 that the prolific oyster bars of the Chesapeake were overfished and the foundation of the great shell rocks destroyed.

"That eminent biologist, Dr. William K. Brooks of the Johns Hopkins University, a member of the Oyster Commission of Maryland, in his report of 1884, urged the General Assembly of Maryland to return the oyster shells to the bars, in order to ensure their continuance. His advice was not heeded, and, year by year, the production declined. Now, after some 40 years' delay, the State of Maryland is following the advice of Dr. Brooks and planting oyster shells on the depleted natural bars in sufficient quantities to bring results. Thanks to Governor Ritchie, the General Assembly of 1927 passed an act which has enabled the Conservation Department to plant over 4,000,000 bushels of oyster shells and seed oysters on the depleted natural bars of the State. By this work, and through private planting, depletion has been stemmed and Maryland's oyster production is once more on the up-grade.

"Another of Maryland's great water crops, the blue crab, was also threatened with destruction. An investigation by the United States Bureau of Fisheries, which disclosed the fact that Virginia held the key to the situation, enabled the State of Maryland to successfully fight certain interests which were opposed to the remedial legislation offered to the Virginia Assembly in 1926. This legislation, known as The Sponge-

Crab Law, had been agreed upon at a conference called by Governor Ritchie in 1924, at which were brought together the Governors and the fishery officials of Virginia, Maryland, and the Federal Government. A year after its passage, the crab production of the Bay showed a marked increase, and by 1931, according to Government figures, 69,000,000 pounds of crabs were marketed, an increase of 39,000,000 pounds over the production of 1925, the year before the passage of the sponge-crab law. This increased production was especially valuable to our citizens in 1930, when the drought of that year played havoc with agriculture in both Maryland and Virginia. It has been estimated that the crab supply of that year added $1,000,000 to the incomes of Maryland and Virginia watermen at a time when it was sorely needed and last year gave additional employment to 1,500 citizens.

* * * * * * * *

"The Chesapeake Biological Laboratory, which we are dedicating today, marks another forward step in the conservation of the marine life of Maryland. Scientific investigations have been going on at Solomon's Island in a small way since 1919. In 1924, through the cooperation of the University of Maryland, arrangements were consummated whereby Dr. R. V. Truitt, of the University, was detailed to carry on this work. A temporary laboratory was established on the island, the parish house of the Episcopal Church being furnished without cost for this purpose. The principal investigations covered the spawning of oysters in Chesapeake Bay, development of seed areas, experiments with various types of spat collectors, etc.

"The importance of this work was recognized by Governor Ritchie, who recommended to the General Assemblies of 1929 and 1931 that an appropriation of $40,000 be made for the erection of a suitable station for the purpose. The result is the building you see here, which was completed and equipped for research and instruction within the limits of the appropriation.

"In selecting this site, the Conservation Department feels that it has made a wise choice. The geographic location of Solomons is well adapted for investigation purposes, since it is located on the Patuxent, a river that is deep and pure and richly supplied with marine life, it is within easy access of the main oyster-producing areas of the Bay, and just opposite, on the other side of the Bay, is the 1,000-acre experimental oyster farm which the State has recently established in Honga River, and where experiments are now being carried on in connection

with the raising of seed oysters. All these factors make Solomons ideal.

"To the citizens of this island and Calvert County we are indebted for the land on which the laboratory stands, and also for sufficient land in the rear of the building for additional structures should they become necessary in the future development of this station. The patriotism and interest shown by the citizens of this section is further displayed by the action of the Pythian Sisters of Solomon's Island, who erected the steel flagstaff which stands on the property, and who will now present to the laboratory and the State an American flag."

SENATOR WEBSTER'S GREETINGS

"MR. CHAIRMAN, GOVERNOR RITCHIE, LADIES AND GENTLEMEN:

"On this occasion I am happy to extend to our visiting guests cordial greetings of welcome to our town of Solomons. I am gratified that Providence has permitted me to participate with you in the dedication of this, our State's biological laboratory at Solomons—the first of its kind in our State.

"For more than one score years and ten I have tried in my poor way to bring to the attention of our government and our State, through the various channels in its departments, our natural waterways and fine harbor. Having been accepted by our government as unsurpassed by no harbor in the United States and equaled only by one, I felt recognition was logically due. Now I am pleased to state that recognition has come through our fair State of Maryland.

"It would be remiss today if I did not bring to your attention those who have participated both in the location and erection of this State institution.

"First, I have in mind Dr. R. V. Truitt, professor of aquiculture of the Maryland State University, who, a native of the Eastern Shore, some 10 years or more ago, sailed the broad waters of the Chesapeake Bay in search of a logical point at which he could make some scientific study of the oyster culture of the Chesapeake Bay. He landed at Solomons and, learning of his intention, I offered to him the Protestant Episcopal parish house for his use. Dr. Truitt has used this building continuously until this present year. He has been untiring in his efforts and he has accomplished much in the way of scientific study in connection with the marine life of the Chesapeake Bay, which we hope will be accepted as of value to our State. To Dr. Truitt, as a pioneer in the interest

of this work, we feel very grateful. We wish him continued success.

"We have with us today the Honorable Swepson Earle, chairman of the Conservation Department of Maryland. In my relationship with Mr. Earle for many, many years I have been impressed with the fact that he has had a vision that an institution of this kind connected with his Department would help to solve the very many problems relating to the marine life of the Chesapeake Bay. When Mr. Earle learned that the State was willing to make an appropriation to construct this laboratory, his many friends from the Eastern Shore became very enthusiastic for its location on the Eastern Shore and made him liberal offers of assistance. I believe, however, that Mr. Earle felt called upon to use his better judgment and make the selection which he has done, rejecting the many alluring offers from his friends. We feel very much indebted to Mr. Earle and it is hoped that his selection will never prove to be an error. It is hoped that Mr. Earle can and will solve the varied problems in connection with the natural resources afforded by our great Bay. We sincerely wish Mr. Earle every success in his undertaking.

"It is fitting that I should bring to your attention the Committee of Solomons, which sponsored and made possible the raising of the sum of $3,500 for the purchase of the plot of land upon which this building is erected. I personally know all those who made contribution. I also know that many of them made great sacrifices. It is hoped they will always feel they are a part of this institution, that they own at least one brick in its foundation, and that they will ever look with gratification upon their work in the building of this laboratory.

"Last to participate are our ladies. It seems that no organization or work, local or otherwise, is complete without their voices. They volunteered to place the steel flagpole with its American Flag to wave over this State institution in the balmy breezes of Solomons. It is hoped that always as the salted breezes from the ocean pass up the Chesapeake Bay, cross the placid waters of the Patuxent and unfurl the Stars and Stripes over this institution, they will cherish with pleasant memories their part in the completion of this laboratory.

"Last but not least, it behooves me to bring to your attention our worthy Governor, His Excellency, Albert C. Ritchie, who by the stroke of his pen made possible the materialization of our work. Without his signature, without his consent, our work would have availed nothing. I personally feel very

grateful to our Governor. I know that since he has been Governor of the State of Maryland he has tried, in the interest of the marine life of the Chesapeake Bay, to solve the many, many problems presented. He has brought about cooperation and saner and more progressive laws, feeling at times that the results have not been as anticipated, yet keenly alive to the ever decreasing asset in the marine life of the Chesapeake Bay, and always adhering to the proverbial adage that persistency and pluck will win the battle of strife. If there are any citizens in our fair State of Maryland who should have everlasting gratitude to our Governor it should be the citizens of the tide-water counties of Maryland. It is hoped that the scientific study made possible by the operation of this laboratory under the Conservation Department of the State will restore the natural resources of the Chesapeake Bay, to the end that our people will accept this institution as a monument and that our Governor will not have to die to reap his reward.

"In conclusion, my fellow guests, may I repeat that I feel signally honored that Providence has permitted me to participate with you this day in the dedication of this laboratory. I see many faces that I recognize and I feel that I am with an audience to which I am not a stranger, and I am gratified to state that on this occasion there is no budget to be balanced. I am here to welcome you and I deem that privilege an honor delegated to me. I extend to you cordial greetings of welcome. May it be that you will find the work here interesting and that you will repeat your visit to the laboratory. It will be our pleasure always to extend to you the true and genuine hospitality for which Southern Maryland is famed."

DR. R. V. TRUITT'S address, in part, was as follows:

"We are, indeed, happy to greet you. We have the laboratory: We have with us just now the people who were instrumental in establishing the laboratory, and we have the interest of the people of the Chesapeake Bay Country. Better yet, if possible, we have before us what we think to be one of the finest fields of service in the world, that of research and instruction; an opportunity to disseminate information and at the same time to add to the storehouse of knowledge. We pledge to you our sincerest efforts towards creative research.

* * * * * * * * *

"Through the cooperation of certain select educational in-

stitutions in Maryland—Goucher College, the Johns Hopkins University, St John's College, University of Maryland, and Washington College—a well-trained staff has been assembled, and its members are doing a fine work, not only in investigation but in teaching as well.

"The staff of the laboratory this summer is as follows: Laura Hintze, Ph.D., Wisconsin University, now at Goucher College has charge of our work in protozoology. Gardner Lynn, Ph.D., Johns Hopkins University, has charge of the paleontological work. At this immediate time Dr. Lynn is in Jamaica on a special expedition. Fred Appel, Ph.D., Chicago University, now at St. John's College, has charge of our work in embryology. Elizabeth Deichmann, Ph.D., Radcliffe College, member of the staff of the Harvard University, Museum of Comparative Zoology, representing Washington College, is in charge of our invertebrate work. G. W. Jeffers, Ph.D., Toronto University, associated with the Biological Board of Canada, is our ichthyologist. Representing the University of Maryland, my special field is the work of ecology."

DR. RADCLIFFE'S address, in part, was as follows:

"If we were to roll back the pages of history 150 years to the time of George Washington, we would find a land unsurpassed in natural resources—millions of acres of fertile soil and forests, an abundance of game and fish, and a wealth of minerals, coal, and oil beneath the surface. In the intervening years much of our economic wealth has been derived from the exploitation of these resources. With the reduction of soil fertility, deforestation, and a diminished game and fish supply in one area, our forefathers pushed out into new areas covering the entire nation. Having exploited the richest of these resources, we are now confronted with the problem of developing a program of husbandry and restoration wherever practicable. Agriculture has profited immensely from many years of study of its problems, deriving benefits from governmental laboratories, agricultural colleges and experiment stations, and the labors of thousands of men and women who have graduated from these institutions and devoted their lives to the study of the problems of this great industry. As a result it has been authoritatively stated that the farmer of today knows more science, and makes daily application of it, than the scientist of 50 years ago knew.

"No such progress has been made in the administration of our fishery resources. The problems of fishery administra-

tion are state, national, and international. Interstate and international phases add to the difficulties. Fish and free-swimming shell-fish do not recognize boundary lines—they pass freely from the waters of one state or one country into the waters of another. For the most part there is no individual ownership of these free-swimming forms. Whatever is done to protect and upbuild the supply must be for the common good. Therefore except in the case of oysters and other forms not free swimming, incentive for the investment of private capital has for the most part been lacking.

"With these thoughts thoroughly fixed in one's mind, it should be evident that governmental aid is an essential to the proper husbandry of our fisheries, not alone the aid of the government of one state or one country but through united cooperative action. Maryland by itself cannot provide adequate protection to the crab, shad, or sturgeon. There is evidence that the parents of the sea trout taken off the coast of Jersey deposited their eggs in more southern waters, perhaps off Maryland or Virginia. The husbandry of our fisheries must therefore of necessity be a function of governments.

"The fisheries of Maryland are a great natural resource, worthy of an adequate system of husbandry. In 1930, they furnished employment to about 25,000 of your people, including 8,527 persons actually engaged in fishing. They supplied over 35,000 tons of protein food and products used in the arts and industries, for which your fishermen received nearly $4,000,000. Manufacturing and handling nearly doubled this value, making it a seven-million-dollar industry. In addition, many of your people as well as thousands from outside your borders participated in the healthful pursuit of angling and crabbing. Your shore resorts and other agencies catering to the tourist trade in providing boats, bait, boatmen, lodging, food, and other accessories profited much. The richness of marine products in factors essential to preventing deficiency diseases in man and his domestic animals enhance the value of such foods to the nation. In these and other respects your fisheries contributed to the wealth and welfare of your State and should be carefully administered.

"Yet a review of the fisheries of Chesapeake Bay leads to the inevitable conclusion that the decline in the supply of staple products needs to be remedied. In the nineties, the catch of shad ranged between 13,000,000 and 17,000,000 pounds, at present it is but slightly in excess of 7,000,000.

The catch of oysters in 1880 exceeded 17,000,000 bushels, in 1890 it was 16,500,000 bushels; in 1920, 8,500,000 bushels; and in 1930, slightly over 5,000,000 bushels. In 1880, oysters represented 48% of the total catch of fishery products in Maryland and Virginia, and in 1930, only 14%. With the development of markets for crabs the catch increased from 9,000,000 pounds in 1890 to over 50,000,000 pounds in 1915, and then abruptly dropped to a level of about 22,000,000 pounds. Following scientific studies and the enactment of protective measures, the catch recorded a new high in 1930 of nearly 69,000,000 pounds. Can this fishery be maintained at the present high level of production and can the shad and oyster fisheries be restored to their former levels of production, are problems we may rightfully seek to solve.

"We cannot change the habits of the shad, crab, or oyster by legislation. We cannot get free-swimming forms to recognize boundary lines. Chesapeake's great fish supply enters the neck of the bottle at the capes. Regardless of whether these fish progress up the Bay for only a few miles or on up the Bay and the rivers for hundreds of miles, they are open to attack by man. The private individual can contribute but little to maintenance of the supply. Because of the lack of individual ownership, he lacks incentive. Governments must find out the facts regarding the habits of aquatic life and wisely apply this knowledge to developing a policy of fish husbandry for the common good.

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"From my discussion of the fisheries situation it should be evident that important fisheries have been endangered; that the husbandry of our fisheries is a function of governments rather than private enterprise; that to set up such a program we must ascertain the facts regarding the life histories and habits of our fisheries; that we must follow the condition and trend of each important fishery; that the National Bureau of Fisheries is unable to keep pace with demands for scientific knowledge, and that several of the states are conducting important researches in this field and have established laboratories for such work.

"I congratulate you, Governor Ritchie, your Conservation Commissioner, and your State Legislature for the progressive action taken by the State of Maryland in establishing the Chesapeake Biological Laboratory.

"Laboratories and their equipment have always been re-

garded as workshops and tools of scientists provided to permit them to pursue undisturbed their search for knowledge, but this laboratory dedicated today is unique because of the particular service it is designed to render. Established by the Conservation Commission, it is the outward evidence of the determination of the government of this Commonwealth to discharge with fidelity and competence its sacred trust in conserving its God-given resources for its citizens, present and future; conserving by not merely locking them up but, like the talents entrusted to the faithful servants of old, to be put to use, to wise use, and to be made to multiply. This is true conservation.

* * * * * * * * *

"In carrying out this program I assure you of all practicable aid and cooperation from the Commissioner of Fisheries and the Bureau's staff. I hope you will not be impatient with the scientists you assign to the researches and I trust that over the years this laboratory may fully justify your faith in its usefulness to the State. Again I congratulate those who have made this event possible.

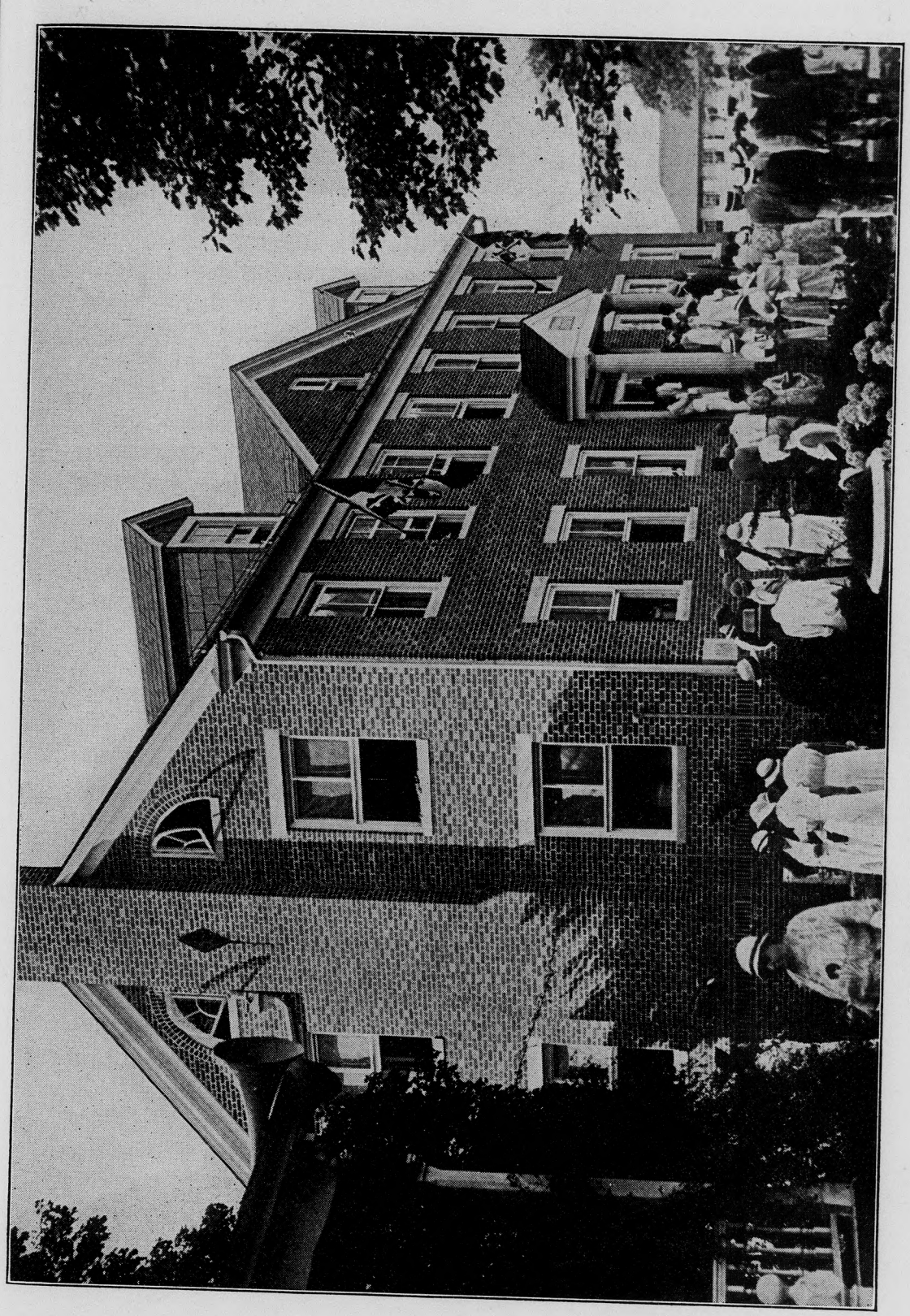
ADDRESS BY DR. JAMES G. NEEDHAM

"I bring you the congratulations of the hydrobiological fraternity. This is a fine laboratory in a wonderful environment, with live problems at its very doors.

"This is an undertaking of great promise. It brings research facilities to the problems. In laboratories remote from the sources of experimental materials far too much work is done with a few weazened specimens and under conditions that put a strain on their very existence. Here one may work in the midst of all the wealth of nature, and may know that he is dealing with natural conditions. Here the training of the university laboratories and the facilities of the field may come together, and practical problems may be met in a practical way.

"Here are vast natural resources, and we know right well that there are difficulties in their management. It is time to stop guessing as to what should be done, and time to start fact-finding with adequate facilities. More knowledge is needed. Understanding leads to control.

"This laboratory will be a center for studies of the life of the water. The chief reason for its existence is the need for more knowledge. The difference between the civilized man and



SCENE AT DEDICATION OF SOLOMONS LABORATORY

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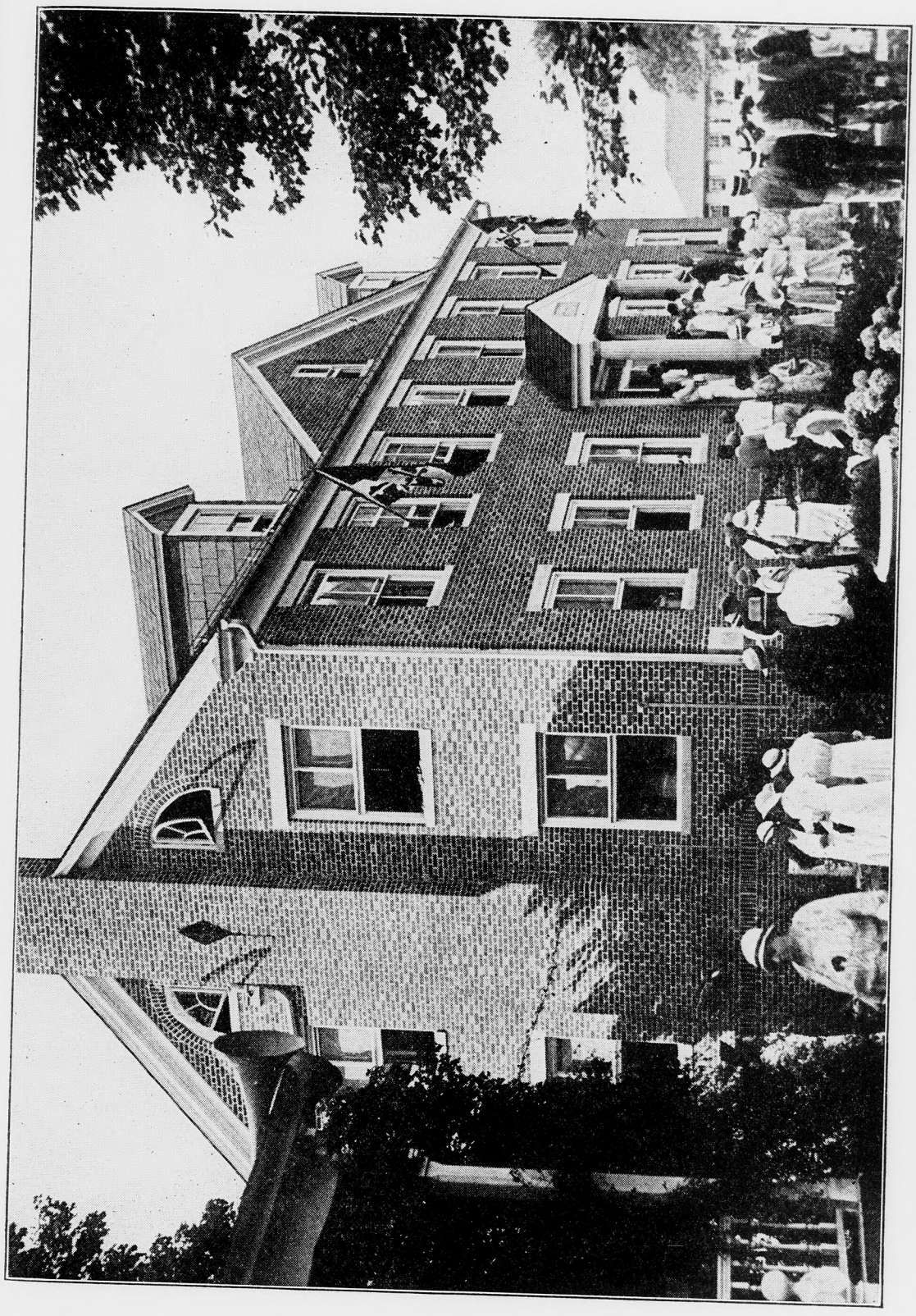

SCENE AT DEDICATION OF SOLOMONS LABORATORY

the savage lies chiefly in what the civilized man has learned to do.

"We marvel today at the changes that have come over human affairs in our own time: Science seems to be transforming the world and the rate of its progress is ever accelerating. And why? Is it not because society has become aware of its own intellectual resources and has begun developing them first by offering encouragement to invention and latterly by offering encouragement to research? Invention is encouraged by the instrumentality of the patent office; research by the experiment stations and by laboratories such as this one. Science began to make the world over when it became cumulative; when observers began to preserve detailed records of observations and experiments; when its problems were analyzed and split into manageable parts and tackled one at a time; when it organized cooperation and provided for comparison and criticism of results, and put these results into economic uses.

"The spirit of inquiry into the processes of nature lies at the root of all human progress. Scientific curiosity has been called 'the divine instinct.' It sets us apart from all other creatures. We seek to know. Of all creatures living on the earth, we of the human species are the most inquisitive. We share with animals certain states of mind—joy, fear, anger, curiosity, etc.—and manifest them by like behavior. We probably do not get more frightened or more angry than some other creatures, but we are far more curious to know about things. Therein lies a difference that in its cumulative results sets us so far apart from other living things as to make us seem like another order of being. This desire to know is responsible for the development of all our science.

"It is a great pleasure to come to this bountiful spot, and to share in these exercises at the founding of a biological laboratory in a place where life does so abound, and where every turn invites to its pleasurable contemplation. How beautiful nature is toward the waterside! What an astonishing abundance and variety of both plant and animal life she bestows here! We have been too long content to say 'What a pity that so little of it is of any use to us!' How much of the wild life of the upland is of any use to us? If we have found out how to manage in our own interest the products of the upland field, and have no water gardens, that is our own fault and not nature's. Earth yields her increase quite impartially. We have studied intensively the problems of the land, and only haphazardly those of the water.

"Agriculture has its experiment stations in every state in the Union, doing for the crops of the land what ought next to be done for crops of the water. Valuable aquatic animals should be studied, as land animals have been, until we know every detail concerning their food, their enemies, both predatory and parasitic, their times and seasons, and the conditions that make for their increase. This means research—sustained research—which is the work for patient investigators. It will for the most part be done by men working alone; for nature does not yield up her secrets to a crowd, or even to a committee, but only to her humble and watchful devotee. After a discovery of a fundamental nature has been made, then cooperation is needed to learn the limits of its application. Life is a complex of changing factors, and environment is a complex of unstable conditions. A good method is a good method only locally and under certain conditions. It needs to be tried out, zone by zone, and province by province; and the cooperation of many hands in many places is often needed to find its limitations and its true economic value. Field laboratories like this should be maintained, if not in every state, at least in every principal region of North America, for the study of aquatic biology and for the development of a real aquiculture.

"This laboratory will be of service to the great coastal region of the eastern United States, but it will especially serve Maryland; for the problems of the Chesapeake, due to conditions peculiar to the Chesapeake, can be studied best in the Chesapeake. The State of Maryland is to be congratulated on this enterprise. It is well conceived for the betterment of her vast aquatic resources. Here she provides facilities for research, for fact-finding, concerning these resources. It is quite safe to predict that this will prove to be one of her best investments.

"It is altogether appropriate that this laboratory should be located here, near where that great American zoologist, William Keith Brooks, made his pioneer investigations and prepared his monumental work on the oyster. It starts with the goodly tradition of his excellent work. It will be well if this laboratory can retain his interest both in pure science and in its applications to human welfare. His most intensive technical undertakings never estranged him from his interest in the practical problems of biology in the Chesapeake.

MARYLAND FISHERIES

PUBLISHED BIMONTHLY BY CONSERVATION DEPARTMENT,
SWEPSON EARLE, Commissioner.

No. 17

JULY, 1932

WIDER SEA-FOOD DISTRIBUTION

THE Atlantic and Gulf Coast States have never been united in one concerted effort to bring before the consuming public of the United States the importance of sea food in the diet. The efforts of the Oyster Growers and Dealers' Association of North America have been far-reaching, but their success has been confined to the states north of Chesapeake Bay.

At the last two meetings of the National Association of Shell-fish Commissioners in conjunction with the Oyster Growers and Dealers' Association of North America at Sayville, L. I., the need for closer relationship between the administrative and production sides of the shell-fish industry was apparent. It is now believed that the time is ripe for those in charge of the fishery departments in the states along the Atlantic and Gulf Coasts to extend a helping hand to the producers in obtaining a proper distribution of our water crops.

In the State of Maryland we have reached the point where the oyster and crab production is on the up-grade. In the case of the former, this has been brought about by extensive shell planting and protection of the natural oyster bars during the past few years. Our 1931-32 production showed a quarter of a million bushels increase over the preceding season, and the production for the coming season promises to exceed 1931 by probably another quarter of a million bushels.

Due to the passage of cooperative legislation by the States of Maryland and Virginia to protect the sponge and green crabs, the blue-crab production in the Chesapeake jumped from 29,000,000 pounds to 68,000,000 in five years.

It might be said that the fishery departments have accomplished their duty when they increase the supply of sea food, and it is not up to them to take a hand in the distribution.

It is our opinion, however, that we must keep the supply and demand balanced, and when we find a greater supply of sea food than we can market, it is up to us to aid the producers in seeing that this surplus is properly distributed.

In Maryland, through our State Sea-food Auditor, we are now investigating the distribution of sea food, in order to determine what places without our own State are not consuming their share. We feel that this move could well be followed in other states of the Atlantic and Gulf Coasts. With proper publicity in such sections where the demand is below normal, we believe it may be possible to increase the consumption from 15% to 25%.

We are heartily in favor of a national campaign to advertise sea foods *generally*, and this means giving the public the facts about the food and health value of oysters, fish, clams, etc., as a whole, and not attempting to advertise certain localities which produce these water crops. Who will reap the benefit of such a move? It will not only include those who are engaged in harvesting sea foods, but it will benefit the packers and shippers and the consumer as well. If, therefore, we expect to make progress in increasing the demand for these valuable water crops, we must work as a unit.

It is our idea that when a given sea food is "in season," radio talks and other forms of publicity should announce the fact to the public. Such publicity, particularly radio talks, issued by or under the direction of fishery and conservation officials of the several states would perhaps have more weight with the public than if attempted by individual firms selling some particular product.

THE SOLOMONS LABORATORY

The Conservation Department is much gratified with the initial year in the work of the Chesapeake Biological Laboratory at Solomon's Island. The dedication of the building on July 19 was a great success, and the work that has been done was fittingly commented upon by the Governor, Dr. Lewis Radcliffe, of the U. S. Bureau of Fisheries, and Dr. James G. Needham, of Cornell University.

As was announced early in the spring, the Conservation Department decided to make a temporary start in operating the laboratory this year, in order to see how the colleges would

cooperate, as well as to determine the cost of carrying on the work. The policy of the Department in connection with the laboratory has not been fully established, as it is uncertain whether scientific research will be carried on separately from student instruction. The Department will carefully weigh these matters and a definite policy will be formulated before next spring.

VIRGINIA PRESS ASSOCIATION HOLDS ANNUAL MEETING—POTOMAC RIVER FISHERIES DISCUSSED

CONSERVATION COMMISSIONER SWEPSON EARLE left Baltimore on the State Steamer "Gov. McLane" on the 7th of July and proceeded down the Bay to Solomon's Island, where a conference was held with Senator Webster and Dr. Truitt on the dedication of the marine laboratory. He then proceeded to Colonial Beach the following morning to meet Commissioner Richard Armstrong, of Virginia, and also to attend the 44th annual meeting of the Virginia Press Association which was held at this point.

The Commissioners of the two states conferred on the following subjects of interest to both states: The oyster situation in the Potomac River, the blue-crab supply of the Chesapeake, and further protection of shad seeking the spawning grounds, particularly in Potomac River.

Reports received from Maryland Deputy Commanders in Potomac River, as well as Inspector Heflin, of the Virginia police force, indicated an increase in the oyster supply of certain oyster bars in this river, notably Swan Point, Cedar Point and a "catch" reported on Cobb Point. It was decided that the Maryland Commissioner would make a further investigation in the early fall to determine the exact condition of the bars at that time.

A committee from Colonial Beach requested the Commissioners to do something to relieve unemployment among the watermen at this point. They claim that the watermen have always been engaged in oystering in the upper Potomac, and the closing of the river to dredging automatically removed this source of livelihood.

In discussing the crab situation in Chesapeake Bay, both Commissioners agreed that the present supply was adequate to meet the demand, but the danger of a fall-off would exist in the event of a severe winter and ice conditions, which

would result in heavy mortality of crabs. Commissioner Armstrong was still of the opinion that the crab migrated to sea, and requested the Maryland Commissioner to join him in a request to be made of the U. S. Commissioner of Fisheries to detail some members of the investigation force of the Bureau of Fisheries to make a further study of the life history of the crab, especially in the lower Bay.

The question of fish-nets was also discussed, and it was agreed that the waters of the upper Potomac, especially above Quantico, should be protected against nets, in order to permit spawning shad entering this river to reach the upper waters, so that the eggs can be taken by spawn takers of the Bureau of Fisheries for their hatching station, which is located on the Virginia side higher up the river. It was pointed out that most of the shad in the upper Potomac are overripe when taken by the fishermen in their netting operations, and the spawn is consequently lost. The Virginia Commissioner stated that he is making every effort to control nets and give shad a better chance to get to Maryland waters.

The Conservation Commissioner of Maryland returned to Annapolis on the steamer "McLane" Saturday evening.

GOVERNMENT SUGGESTS FURTHER REGULATION OF FISHING IN CHESAPEAKE BAY

AT THE CONFERENCE which took place between Commissioner of Fisheries Richard Armstrong, of Virginia, and Conservation Commissioner Swepson Earle, of Maryland, on the occasion of the annual meeting of the Virginia Press Association at Colonial Beach, the advisability of closing the upper Potomac River to nets, in order to permit more shad to reach the spawning grounds, was discussed. Upon returning to Baltimore, Commissioner Earle at once took up this matter with the U. S. Bureau of Fisheries at Washington to obtain their views on the subject. Following is a copy of letter received from the Bureau of Fisheries:

"Referring to our discussion by telephone relative to closing the Potomac River above Occoquan to commercial fishing, I would offer the following suggestions for consideration:

"*1—Migratory Fish.* In the case of migratory fish, such as the shad, until it has spawned it makes no difference whether a particular fish is caught at the entrance to Chesa-

peake Bay, off the Rappahannock or in the upper reaches of the Potomac, or other stream to which it is headed for spawning. It therefore appears to me that the burden imposed on the fishermen should be distributed as evenly as possible. To this end it is important that the states give serious consideration to providing a weekly closed period to fishing, preferably of not less than 48 hours. Undoubtedly the fishermen will attempt to make this method appear impracticable. It is working successfully in Alaska under more severe conditions, and this being the case, I can think of no valid arguments which the fishermen might advance to the effect that it can not be made workable in the Chesapeake or its tributaries. It is also desirable to leave the fish actually engaged in spawning unmolested, and to this end I would suggest that the taking of shad in the upper reaches of the Potomac and other spawning areas where the fishery is prosecuted, be restricted to gill-nets and then only in the main channel of the rivers, leaving the fish undisturbed on the spawning grounds.

"*2—Closure of Creeks and Coves to Commercial Fishing Operations.* The creeks and coves emptying into the Chesapeake or rivers tributary to the Chesapeake are the nursery grounds of most of the young fish populating these waters. The use of fyke-nets and other gear in these areas is unduly destructive of the young fish, and in our opinion such areas should be closed to the operations of commercial fishermen. Such action would accomplish much in increasing the productivity of these waters.

"*3—Hatchery Operations for Yellow Perch.* When the second proposition is put into effect, permission should be granted to the Federal Bureau of Fisheries or state authorities to take such numbers of yellow perch and other species desired for propagation purposes by any practicable means to supply stocks of eggs needed in hatchery operations.

Very truly yours,

(Signed) LEWIS RADCLIFFE,
Acting Commissioner.

OCEAN CITY INLET PROJECT

AN ANNOUNCEMENT of June 18 from General Lytle Brown, Chief of Engineers, War Department, to the Secretary of War, approved the Ocean City harbor and inlet project for Maryland. The Engineer recommended increasing the depth of water of the entrance channel to 10 feet, in order

to accommodate boats in the inlet, which will be 100 feet wide, and also increasing the channel to Ocean City to a depth of eight feet.

These modifications of the plans will increase the total estimated expenditure to $781,000. The Board also is of the opinion that the jetties should be 800 feet apart instead of 500 feet, as first recommended. It is noted with a great deal of satisfaction, in a letter from Honorable William P. Cole, Jr., Maryland Congressman and member of the Committee on Rivers and Harbors, that the recommendation of the Board of Engineers was unanimously approved. Congressman T. Alan Goldsborough also appeared in behalf of the project, which has the backing of the United States Senators.

At the committee hearing which took place in Washington in the late winter the question of who would maintain the inlet came up for discussion, and when this question was put to Commissioner Earle, it was his opinion that it would be up to the Government. We further note in the recommendation that a yearly maintenance of $30,000 is to be borne by the Government, which will assure a permanent inlet and harbor for the vessels fishng out at sea above and below Ocean City.

The salting of the upper bays of Isle of Wight, Sinepuxent, and Chincoteague will bring about that very important change so necessary for the maintenance of all forms of shell-fish life native to this latitude of the Atlantic Coast.

State Senator Veasey, of Worcester County, in a letter to Commissioner Earle, states that he now feels the road is clear for proper provision to be made for this project in the near future.

¶ Mr. Riley Creighton, of Fishing Creek, Maryland, forwarded to the Conservation Department a crab shell to which is attached a young oyster measuring 1¾". Last year the Department received several crab shells with young oysters attached, and, in fact, we had a very prolific young growth of oysters in many sections of the State waters. We feel that this year is going to be another good one for young growth.

THE BLACK BASS

By HON. RAYMOND H. MILLER,
Sponsor of "The Black Bass Bill"

BLACK BASS, the hardest hitting member of the fresh-water game-fishes, is now at bat, with the angler tossing up all kinds of lures and bait known to the fishing fraternity, and, believe the umpire, he doesn't strike until the right kind of offering comes over the plate, and then, "smash," things begin to happen. Sometimes he misses, often he fouls the bait, but, contrary to the usual game, the pitcher works for a home run, which our friend Bass tries to avoid by popping up and throwing the hook, or stealing from boulder to boulder and snag to snag in wild and frenzied dashes, putting every ounce of fighting strength he possesses against the line and tackle of his opponent, and the inning is not over, nor the game won, until he is safely landed. In the meantime, the admonitions, advice, and decisions of the umpire, who is the only witness to the struggle, would do honor to any veteran of the game, and a detailed explanation of the tactics used, together with illustrated descriptions of the size and weight of the one that tore up the tackle, keeps the crowd gasping for weeks, and starts a trek toward the fishing grounds to catch the whopper that got away.

Fresh-water fishing came into its own in Maryland, and many other states, on July 1, and thousands of anglers started out bright and early on that hot July day to match their wits against that aristocrat of game-fishes, the fighting black bass. Conditions on the upper Potomac were not of the best. Recent rains had clouded the waters and raised the river somewhat, permitting bass to leave their favorite pockets and forage over a wider territory, which is not helpful to bait fishing. Some fair catches, however, were reported around Williamsport, and fishermen were not discouraged, as indications pointed to a successful season on the favorite fishing grounds. There were many evidences of fruitful results from the restocking plan adopted by the Hagerstown and Williamsport chapters of the Izaak Walton League in 1931, in cooperation with the Maryland Conservation Department and the United States Bureau of Fisheries.

A large section of the old Chesapeake and Ohio Canal bed near Williamsport was converted into a bass rearing pond in 1931 by the Williamsport Chapter, and approximately 8,500

black bass, from 5 to 7 inches in length, were transferred from that rearing pond to the Potomac river last October. Most of these fish have attained the legal size of 10 inches or more, and we should have excellent results this season in bass fishing around Williamsport, Maryland, which is most picturesquely located on the upper Potomac, and where guides, boats, bait, and equipment can be obtained at all times.

Some 40 states in the Union have passed legislation protecting the black bass from exploitation and sale at all times during the year. Maryland, with its beautiful Potomac and tributaries, does not offer this protection to that great game-fish, and it follows that black bass in Maryland will go the way of other game species, which have become practically extinct, unless immediate steps are taken to save it from the commercial catch. This is particularly necessary during the cold months, when bass are sluggish and easily taken in nets, and during the spawning season when they faithfully and patiently keep watch over the spawn beds and drive off all intruders on their domestic domain.

Black bass are not easily propagated in captivity, as are trout and some other species, and require native surroundings in order to thrive well. In addition we must clean up pollution wherever possible and maintain clean, pure water. We must also prohibit shipment of bait fish out of our waters, because to deprive our bass of their natural food is to starve them and send them out of our waters seeking it elsewhere.

Food fish for commercial purposes in the Chesapeake Bay country are plentiful, and black bass are the smaller part of the commercial catch. Statistics from the Department of Commerce, Bureau of Fisheries, show that the catch of black bass in Maryland in 1920 amounted to 77,388 pounds, valued at $18,969.00; in 1925, to 35,609 pounds, valued at $6,750.00, and in 1930, to 14,321 pounds, valued at $2,632.00. Do not these figures show conclusively that the supply of this species is rapidly becoming depleted, and the number has dwindled at an alarming rate, until now, we are dependent on the help of the State, Government and sportsmen's organizations to contribute time and money in a vigorous restocking campaign, in order to perpetuate the supply of this great game fish in Maryland waters? In connection with this, we wish to state, that it is contrary to State and Federal policy to continue propagation and restocking in a state which does not afford adequate protection to the species propagated.

The black bass of Maryland is worth approximately $2.00 per pound to the angler. That is the amount expended by the hook-and-line fisherman for the hire of guides, boats, bait, and equipment, while the net fishermen usually receive from 5c to 20c per pound. When one considers the importance of angling as a source of recreation to our people, and the importance of encouraging the development of shore communities, making provision for meeting the needs of the angler, I believe it will be agreed that the saving of this great game-fish for the angler will mean much more to the State than to permit this species to enter the commercial catch.

A bill will be introduced in the 1933 session of the Maryland General Assembly to prohibit the sale of black bass, and to prevent shipment into or out of the State for purposes of sale, and we want to urge all of you who are interested in preserving this fine game-fish for posterity to get behind this important measure and make a personal plea to members of the Maryland Legislature to vigorously support it. Our sister States of Virginia and Pennsylvania, as well as the District of Columbia, have already taken this important step, and surely the anglers of Maryland are entitled to similar legislation looking toward the conservation of this great game-fish, not alone for the present, but also for the benefit of future generations.

AMONG THE SALT-WATER FISHERMEN

Some fine catches of bluefish or tailor are being reported from Chesapeake Bay around Point Lookout. Capt. A. P. Cullison, of the State police boat "St. Mary's," advised that L. B. Huntington, who has a house-boat in Smith Creek, fished from his tender in the Bay east by south from Point Lookout on July 5, 6, and 7, and caught a total of 266 bluefish averaging around 3 pounds in weight. He caught 111 fish the first day, 87 the second, and 68 the third day. C. R. Levin, another fisherman, caught 55 bluefish on July 7.

It is also reported that a great many hardheads and trout are being caught by fishermen in St. Jerome's Creek, and fishing generally is good from Point No Point to Point Lookout Bluff. Very few fish are reported in the Potomac on the Maryland side from Piney Point to Point Lookout, however.